West Lake Update

November 23, 2015

EPA Determines Extent of RIM in Operable Unit 1, Area 1

This year, EPA directed the Potentially Responsible Parties (PRPs) to fully define the extent of radiologically impacted material (RIM) at the southwest boundary of Area 1 at the West Lake Landfill. This sampling effort is referred to as "Phase 1D" and builds on previous rounds of sampling in this area of the site. Phase 1D identifies the southern extent of RIM in Area 1 to aid in the decision making on a barrier between RIM at the West Lake Landfill and the subsurface smoldering event in the Bridgeton Landfill.

Contractors for the PRPs performed this work under EPA oversight, and subject to worker safety standards. Overall the contractors collected 25 samples from soil borings.

Understanding where and how much RIM the landfill contains is a critical step to assist in evaluating potential locations for an isolation barrier, and defining the extent of RIM to inform EPA's decision regarding a final remedy for the site.

The location of an isolation barrier is dependent on knowing where the RIM is within the landfill. The Phase 1D sampling has provided EPA with the information needed to identify the southern boundary of the RIM in OU1 Area 1.

EPA is evaluating isolation barrier options under consideration due to a subsurface smoldering event (SSE) occurring in the adjacent Bridgeton Landfill. The SSE is a chemical reaction deep in the buried waste that results in elevated temperatures underground. The purpose of an isolation barrier would be to prevent the SSE from reaching the RIM located in Operable Unit 1 of the West Lake Landfill.

An isolation barrier may take any number of forms. One option would be to install a physical barrier between the SSE and the RIM. Another option would be the installation of engineering controls to reduce temperatures in strategic locations beneath the surface. By reducing temperatures, the chemical reaction would be slowed or prevented from advancing beyond those engineering controls.

EPA is working closely with the U.S. Army Corps of Engineers (USACE) to evaluate the latest Phase 1D data to make a decision regarding the isolation barrier. USACE will conduct an independent review of all information related to the isolation barrier and make a recommendation to EPA. EPA expects to announce its decision on the potential isolation barrier by the end of 2015, after the agency and USACE complete their analysis.

Current data indicate that the SSE in the Bridgeton Landfill remains approximately 1,000 feet from the RIM contained within the West Lake Landfill. A recent report by the Agency for Toxic Substances and Disease Registry confirmed previous findings that there is currently no off-site exposure or health risk posed by the radiological waste contained within the West Lake Landfill.

Split Samples: Regulatory Oversight in Action

As the lead regulatory agency at the West Lake Landfill, EPA must ensure the scientific integrity of data generated at the site, especially if that work is done by the PRPs' contractors. While EPA has a suite of tools at its disposal to ensure that integrity, one of the most critical is the split sample technique.

A split sample is when EPA personnel take material from the PRPs' samples to conduct its own independent laboratory analysis. The split sample is sent to a different certified laboratory than the original sample is sent. EPA then compares the results of that analysis to the results submitted by the PRPs to the agency.

EPA has regularly taken split samples at the West Lake Landfill and will continue to do so as the agency exercises its oversight authority at the site.

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